

Observations of Jupiter's Satellites, made at the Stonghurst Observatory. By the Rev. S. J. Perry.

1879. Satellite.	Phenomenon.	G.M.T.			In excess of N.A.		Observer.	Remarks.
		h	m	s	m	s		
June 4	I Ec. D. last seen	14	28	57.5	+0	17.5	W.C.	Fair, daylight, thin clouds passing.
Sept. 28	" Tr. I. external contact	11	55	47.6			"	Good.
	bisection	11	58	9.7				
	int. contact	12	0	36.6				
"	Sh I. int. contact	12	42	17.1			"	Very poor, faint. Very unsteady.
"	Oc. D. ext. contact	9	12	19.7			"	Poor, tremulous, ill defined.
	bisection	9	14	5.7				
	last seen	9	16	22.2				
"	Ec. R. first seen	12	13	59.4	-1	8.6	"	Slightly unsteady, but definition very good.
	full light	12	16	29.4				
Oct. 14	Tr. I. bisection	10	0	21.5			"	Difficult, thin clouds, very tremulous.
"	Sh. I. bisection	11	0	41.3			"	Poor, very tremulous.
	internal contact	11	1	56.4				
	Tr. E. bisection	12	18	52.4			"	
	external contact	12	21	31.1				
"	Oc. D. external contact	7	11	39.6			"	
	bisection	7	14	42.6				
"	last seen	7	17	9.7				

Jan. 1880.

made at the *Stonyhurst Observatory*.

145

I	Ec. R. first seen	10	34	59.7	—0	8.3	S.J.P.	Very good.
	nearly full light	10	36	9.6				
III	Tr. E. bisection	11	2	54.6			"	Steady.
"	external contact	11	7	20.6				
"	Sh. I. bisection	12	1	3.6			"	
	internal contact	12	5	26.1			W.C.	
II	Tr. I. external contact	5	56	54.8			W. McK.	Unsteady.
	bisection	5	59	41.8				
	internal contact	6	2	39.3				
"	Sh. I. bisection	8	24	22.4			W.C.	Good; cloudy, tremulous.
	internal contact	8	25	43.7				
"	Tr. E. internal contact	8	47	56.9			W. McK.	
	bisection	8	52	11.7				
	external contact	8	54	26.4				
IV	Ec. D. half light	9	23	57.8			S.J.P.	Sky very clear; compared with Satellite II.
	quarter light	9	26	11.6				
	last seen	9	29	38.8	—4	50.2		
II	Sh. E. bisection	11	11	39.5			W. McK.	Rather indistinct; approximate.
"	Ec. R. first seen	5	23	16.2	—0	32.8	S.J.P.	Compared with Satellite I.
	half light	5	25	8.2				
	full light	5	27	17.7				

1879.	Satellite.	Phenomenon.	G.M.T.		In excess of N.A. m s	Observer.	Remarks.
			h m	s			
Nov. 1	III	Tr. I. external contact	11 3	21.5		W. McK.	External contact perhaps too early; poor definition; very unsteady.
		bisection	11 8	26.0			
		internal contact	11 14	19.5			
	II	Tr. I. external contact	8 29	15.6		S.J.P.	Rather tremulous.
" 2		bisection	8 32	19.5			
		internal contact	8 34	46.7			
	IV	Tr. I. external contact	8 15	58.0		"	External contact possibly a trifle late; definition good.
		bisection	8 19	21.0			
" 7		internal contact	8 23	17.0			
	I	Oc. D. external contact	7 14	1.8		W.C.	Cloud; very poor.
		bisection	7 14	59.3			
	II	Oc. D. external contact	5 9	27.2		S.J.P.	Very steady; definition good. Between bisection and disappearance satellite apparently projected on to limb.
" 14		bisection	5 12	37.5			
		last seen	5 15	36.2			
	"	Ec. R. first seen	10 36	49.2	-0 26.8	"	Slightly hazy.
		half light	10 39	37.5			
" 14		full light	10 41	40.7			
	III	Oc. D. external contact	8 31	48.5		"	
		bisection	8 35	26.0			

	last seen	8	39	59 ^o			
I	Oc. D. external contact	9	7	0 ^o	"		
	bisection	9	10	13 ^o			
	last seen	9	12	41 ^o			
" 23	Oc. D. external contact	5	28	14 ^h 8	W.C.	Very unsteady.	
	bisection	5	30	50 ^h 3			
	last seen	5	33	0 ^h 3			
"	Ec. R. first seen	9	11	31 ^h 1	+0 12 ^h 1	Slightly hazy; good. Compared with Sat. II.	
	half light	9	12	16 ^h 3			
	full light	9	13	4 ^h 1			
IV 27	Oc. D. external contact	8	51	41 ^h 4	S.J.P.	Clear, but unsteady, passing clouds; approx.	
	bisection	9	0	23 ^h 9			
" 30	Oc. D. external contact	7	25	56 ^h 2	W.McK.	Unsteady.	
	bisection	7	28	21 ^h 7			
	last seen	7	30	40 ^h 2			
Dec. I	Sh. I. internal contact	6	2	34 ^h 5	W.C.	Good; shadow very dark.	
"	Tr. E. internal contact	6	54	28 ^h 0	"	Satellite very faint.	
	bisection	6	56	21 ^h 5			
	external contact	6	59	56 ^h 5			
"	Sh. E. internal contact	8	14	3 ^h 7	"	Very poor.	
	bisection	8	15	50 ^h 2			
	last seen	8	17	34 ^h 2			

1879. Dec. 2	Satellite.	Phenomenon.	G.M.T. h m s	In excess of N.A. m s +0 22.8	Observer.	Remarks.
	"	Ec. R. first seen	5 36 13.8	S.J.P.	Very good, sky not very clear; compared with Satellite III.	
		full light	5 38 57.7			
	III	Tr. I. external contact	6 44 3.0	"		Misty; definition very bad.
		bisection	6 51 25.5			
" 3	III	Tr. I. external contact	8 5 34.9	"		Definition very poor; hazy.
		bisection	8 9 3.1			
		internal contact	8 12 59.0			
" 6	III	Ec. R. first seen	5 28 0.0	"		
		half light	5 29 56.3			
		full light	5 32 8.6			
" 8	I	Tr. I. bisection	6 36 4.1	W.McK.		
		internal contact	6 39 36.2			
"	"	Tr. E. bisection	8 57 58.8	S.J.P.		Misty, definition bad. After transit Satellite I. was only visible by glimpses, although the other satellites were well seen at the time. Cut off glare of planet, and yet Satellite I. only just visible for more than half an hour after transit. Used powers from 100 to 350.
		external contact	9 0 34.8			